AMENDMENTS TO THE CLAIMS:

Claims 1-36 (canceled)

Claim 37 (Currently amended). A recombinant marker gene disposed within a cell encoding an orotate transporter polypeptide ~~suitable for use in a cell~~ comprising an amino acid sequence at least ~~90~~95% identical to SEQ ID NO: 2, wherein the cell is pyrimidine auxotrophic.

Claim 38 (Previously presented). The marker gene of claim 37, which is a selection marker, a screening marker, a counter-selection marker, and/or a bi-directional selection marker.

Claim 39 (Previously presented). The marker gene of claim 37, wherein the encoded orotate transporter polypeptide also transports one or more orotate analogues.

Claim 40 (Previously presented). The marker gene of claim 37, wherein the encoded orotate transporter polypeptide also transports the orotate analogue 5-fluoroorotate (FOA).

Claim 41 (Previously presented). The marker gene of claim 37, which is transcribed from at least one heterologous and/or artificial promoter.

Claim 42 (Canceled).

Claim 43 (Previously presented). The recombinant marker gene of claim 37 encoding an orotate transporter polypeptide comprising an amino acid sequence at least 96% identical to SEQ ID NO: 2.

Claim 44 (Previously presented). The recombinant marker gene of claim 37 encoding an orotate transporter polypeptide comprising an amino acid sequence at least 97% identical to SEQ ID NO: 2.

Claim 45 (Previously presented). The recombinant marker gene of claim 37 encoding an orotate transporter polypeptide comprising an amino acid sequence at least 99% identical to SEQ ID NO: 2.

Claim 46 (Currently amended). A polynucleotide construct ~~suitable for use~~disposed within ~~in~~ a cell comprising at least one recombinant marker gene encoding an orotate transporter

polypeptide comprising an amino acid sequence at least ~~90~~95% identical to SEQ ID NO: 2, wherein the cell is pyrimidine auxotrophic.

Claim 47 (Previously presented). The polynucleotide construct of claim 46, wherein the at least one recombinant marker gene is a selection marker, a screening marker, a counter-selection marker, or a bi-directional selection marker.

Claim 48 (Previously presented). The polynucleotide construct of claim claim 46, wherein the encoded orotate transporter polypeptide also transports one or more orotate analogues.

Claim 49 (Previously presented). The polynucleotide construct of claim 46, wherein the encoded orotate transporter polypeptide also transports the orotate analogue 5-fluoroorotate (FOA).

Claim 50 (Previously presented). The polynucleotide construct of claim 46, wherein the marker gene is transcribed from at least one heterologous and/or artificial promoter.

Claim 51 (Previously presented). The polynucleotide construct of claim 46, wherein the polynucleotide is DNA.

Claim 52 (Previously presented). The polynucleotide construct of claim 46, wherein the construct is extrachromosomal and comprises one or more sequence(s) providing autonomous replication and/or autonomous maintenance in a host cell.

Claim 53 (Previously presented). The polynucleotide construct of claim 46, which is integrated into the genome of a host cell.

Claim 54 (Previously presented). The polynucleotide construct of claim 46, which is a plasmid, a linearized plasmid, or a multimerized plasmid.

Claim 55 (Previously presented). The polynucleotide construct of claim 54, wherein the plasmid comprises at least one origin of replication that is functional in a host cell.

Claim 56 (Previously presented). The polynucleotide construct of claim 46, which further comprises at least one selection marker gene which encodes a polypeptide which in turn confers resistance to an antibiotic when expressed in a host cell.

Claim 57 (Canceled).

Claim 58 (Previously presented). The recombinant marker gene of claim 46 encoding an orotate transporter polypeptide comprising an amino acid sequence at least 99% identical to SEQ ID NO: 2.

Claim 59 (Canceled).

Claim 60 (Previously presented). The recombinant marker gene of claim 46 encoding an orotate transporter polypeptide comprising an amino acid sequence at least 97% identical to SEQ ID NO: 2.

Claim 61 (Withdrawn-Currently amended). A cell comprising at least one exogenous marker gene encoding an orotate transporter polypeptide comprising an amino acid sequence at least ~~90~~95% identical to SEQ ID NO: 2, wherein the cell is pyrimidine auxotrophic.

Claim 62 (Withdrawn). The cell of claim 61, wherein the at least one marker gene is a selection marker, a screening marker, a counter-selection marker, or a bi-directional selection marker.

Claim 63 (Withdrawn). A cell in accordance with claim 61, wherein the at least one marker gene encoded orotate transporter polypeptide also transports one or more orotate analogues.

Claim 64 (Withdrawn). A cell in accordance with claim 61, wherein the at least one marker gene encoded orotate transporter polypeptide also transports the orotate analogue 5-fluoroorotate (FOA).

Claim 65 (Withdrawn). A cell in accordance with claim 61, wherein the at least one marker gene is transcribed from at least one heterologous and/or artificial promoter.

Claim 66 (Withdrawn). A cell in accordance with claim 61, which is a microbial cell.

Claim 67 (Withdrawn). A cell in accordance with claim 61, which is a bacterial cell.

Claim 68 (Withdrawn). A cell in accordance with claim 61, which is a Gram-negative or Gram-positive bacterial cell.

Claim 69 (Withdrawn). A cell in accordance with claim 61, which is of the genus *Lactobacillus, Bacillus, or Escherichia.*

Claim 70 (Withdrawn-Currently amended). A method of selecting or identifying a cell comprising at least one copy of a recombinant marker gene, and/or selecting or identifying a cell which has been cured of the recombinant marker gene, wherein said marker gene encodes an orotate transporter polypeptide comprising an amino acid sequence at least ~~90~~95% identical to SEQ ID NO: 2, said method comprising the step of using the marker gene as a selection marker, a screening marker, a counter-selection marker, or a bi-directional marker, under suitable conditions, whereby the cell is selected or identified.

Claim 71 (Withdrawn). A method in accordance with claim 70, wherein the cell is pyrimidine auxotrophic and lacks a functional orotate transporter protein in the absence of the recombinant marker, and wherein the recombinant marker is introduced into the auxotrophic host cell, which is then cultivated in a growth medium with no uracil but supplemented with orotate, wherein only the cell comprising the recombinant marker will grow, wherein the marker is used as a selection marker.

Claim 72 (Withdrawn). A method in accordance with claim 70, wherein the cell is pyrimidine auxotrophic and comprises the recombinant marker gene which encodes a functional orotate transporter protein, and wherein the marker gene is then cured from the cell, which is cultivated in a growth medium with no uracil, wherein only the cell cured of the marker gene is inhibited, wherein the marker is used as a screening marker.

Claim 73 (Withdrawn). A method in accordance with claim 70, wherein the cell is pyrimidine auxotrophic due to a mutation in at least one gene encoding an enzyme which converts dihydro-orotate to orotate.

Claim 74 (Withdrawn). A method in accordance with claim 73, wherein the cell is pyrimidine auxotrophic due to a mutation in one or more of *pyrD, pyrDa, pyrDb,* and *pyrK.*

Claim 75 (Withdrawn). A method in accordance with claim 70, wherein the cell lacks a functional orotate transporter protein in the absence of the recombinant marker, and is resistant to the orotate analogue 5-fluoroorotate (FOA), and wherein the recombinant marker is introduced into the cell, which is then cultivated in a growth medium supplemented with an inhibitory concentration of FOA, wherein only the cell comprising the recombinant marker is sensitive to FOA and is inhibited, wherein the marker is used as a screening marker.

Claim 76 (Withdrawn). A method in accordance with claim 70, wherein the cell comprises the recombinant marker gene and is sensitive to 5-fluoroorotate (FOA), and wherein the marker gene is then cured from the cell, which is cultivated in a growth medium supplemented with an inhibitory concentration of FOA, wherein only the FOA-resistant cell cured of the recombinant marker gene will grow, wherein the marker is used as a counter-selection marker.

Claim 77 (Withdrawn). A method in accordance with claim 70, wherein the cell comprising at least one copy of the recombinant marker gene is first selected or identified, and subsequently a cell which has been cured of the recombinant marker gene is selected or identified, wherein the marker is used as a bi-directional marker.

Claim 78 (Withdrawn). A method in accordance with claim 77, wherein the cell is resistant to 5-fluoroorotate (FOA), pyrimidine auxotrophic, and lacks a functional orotate transporter protein in the absence of the recombinant marker, and wherein the recombinant marker is first introduced into the orotate auxotrophic host cell, which is then cultivated in a growth medium supplemented with orotate, wherein only the cell comprising the recombinant marker will grow, and subsequently the marker gene is then cured from the cell by cultivation in a growth medium supplemented with an inhibitory concentration of FOA, wherein only the FOA-resistant cell cured of the recombinant marker gene will grow, wherein the marker is used as a bi-directional selection marker.

Claim 79 (Withdrawn). A method in accordance with claim 78, wherein the cell is pyrimidine auxotrophic due to a mutation in at least one gene encoding an enzyme which converts dihydro-orotate to orotate.

Claim 80 (Withdrawn). A method in accordance with claim 78, wherein the cell is pyrimidine auxotrophic due to a mutation in one or more of *pyrD, pyrDa, pyrDb,* and *pyrK*.

Claim 81 (Canceled).

Claim 82 (Withdrawn). A method in accordance with claim 70, wherein said marker gene encodes an orotate transporter polypeptide comprising an amino acid sequence at least 99% identical to SEQ ID NO: 2.